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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Olaf Beutler

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EXAMINER

JOHNSON, PHILLIP A

ART UNIT

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3656

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DELIVERY MODE

10/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/537,205	Applicant(s) BEUTLER ET AL.	
	Examiner PHILLIP JOHNSON	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on July 24, 2008 is acknowledged. Claims 13 – 28 are pending in this application. U.S.C. 35 112, second paragraph rejections against claims 13 - 28 documented in the Office Action dated April 28, 2008 are hereby withdrawn based on applicant's response dated July 24, 2008.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following feature must be shown or canceled from the claim(s). No new matter should be entered.

- **the slide bearing lockable by lockable geometry (claim 13)**

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New

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Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 13, 14, 15, 17, 18 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams (USP 3,593,592).** Adams discloses (Fig. 2) all of the limitations of a similar device comprising: a housing (2), wherein the housing is cylindrical and honed throughout (inherent property of the housing inner surface as the bearing is required to slide without undue wear, to ensure reliable operation); at least one thrust member (not shown, but known and old for steering gear systems)/pinion (16) pairing; a rack (1) extending in the housing, the rack operatively connected to the thrust member/pinion pairing; two sliding bearings (5 and 6) arranged between the rack and the housing to guide the rack, the sliding bearing lockable by a locking geometry, the sliding bearing movable with the rack and arranged in a tooth-free region of the rack to preclude contact between the sliding bearing and the pinion; [wherein the rack-and-pinion electro-steering system is adapted to be arranged in a motor vehicle.]

Regarding claim 21, the sliding bearing comprised of an injection-molded part implies a process by which a product is formed and therefore given no patentable weight in an apparatus claim (See MPEP 2113)

Regarding the functional, or intended use recitation(s) in the claim(s) above denoted by the “[],” the examiner notes while features of an apparatus may be recited either structurally or functionally, claims directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. The reference discloses all the claimed structural limitations and therefore anticipates the claim. See MPEP 2114. Additionally, the apparatus is capable of performing the claimed functions.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Shimizu et al. (USP 6,543,569).** Adams discloses all of limitations of a similar device, with the exception of the at least one thrust member/pinion pairing including two pinions and one thrust member associated with each pinion, a first one of the two pinions connected to a servo side of the rack and a second one of the two pinions connected to one of a sensor side of the rack and a steering column.

Shimizu et al. teaches the use of at least one thrust member/pinion pairing including two pinions and one thrust member associated with each pinion, a first one of the two pinions connected to a servo side of the rack and a second one of the two pinions connected to one of a sensor side of the rack and a steering column for the purpose of providing assist torque to compliment steering torque, thus reducing the force required to turn a steering wheel (C1, L12 – 14 and L20 – 26).

It would have been obvious to one of ordinary skill in the art to at least one thrust member/pinion pairing including two pinions and one thrust member associated with each pinion, a first one of the two pinions connected to a servo side of the rack and a second one of the two pinions connected to one of a sensor side of the rack and a steering column, as taught by Shimizu et al., in the device of Adams for the purpose of providing assist torque to compliment steering torque, thus reducing the force required to turn a steering wheel.

6. Claims 19 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Kostrzewa (USP 5,622,085). Adams discloses all of the limitations in a similar device, but fails to disclose wherein the sliding bearing is formed of a high-temperature, high-performance plastic

Kostrzewa discloses a sliding bearing (40 in Fig. 1) formed of a high-temperature, high-performance plastic.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use high-temperature, high performance plastic for the slide bearing material, as suggested by Kostrzewa, since it was known in the art that slide

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bearings formed of high-temperature, high performance plastic can achieve the required performance characteristics (i.e. friction reduction, and wear resistance) at reduce cost and weight.

7. Claims 22, 23, 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Kostrzewa (USP 5,622,085). Adams discloses all of the limitations of a similar device, with the exception of one of a second sliding bearing and a sliding bushing substantially covering a contact area arranged between a thrust member of the thrust member/pinion pairing and a housing part surrounding the thrust member.

Kostrzewa teaches the use of one of a second sliding bearing and slide bushing (40 in Fig. 1) substantially covering a contact area arranged between a thrust member of the thrust member/pinion pairing and a housing part surrounding the thrust member (assembly 38, 54 in Fig. 1) for the purpose of enabling the thrust member to resist relatively large rack and pinion gear tooth separation forces at relatively high temperatures (C1, L25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a second slide bearing or bushing substantially covering a contact area arranged between a thrust member of the thrust member/pinion pairing and a housing part surrounding the thrust member, as taught by Kostrzewa, in the device of Adams for the purpose of enabling the thrust member to resist relatively large rack and pinion gear tooth separation forces at relatively high temperatures.

Regarding claim 23, Kostrzewa discloses wherein one of the sliding bearing and the sliding bushing is inserted into the housing part (3Fig. 1).

Regarding claims 24 and 25, Kostrzewa discloses wherein one of the second sliding bearing and the sliding bushing substantially covering the contact area is formed of high-performance plastic (C3, L4 – 10).

8. **Claims 26, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Bayle (USP 3,844,181).** Adams discloses all of the claimed limitations with the exception of a thrust member of the thrust member/pinion pairing being formed of a slide-modified, high-performance plastic.

Bayle teaches the use of a slide-modified, high performance plastic (C2, L3) for the purpose of providing an improved construction that eliminates rattle noises and impact shock loads (C1, L29 - 41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use materials, as taught by Bayle, in the device of Adams for the purpose of providing an improved construction that eliminates rattle noises and impact shock loads.

Regarding claims 28, the thrust member slide-modified, high-performance injection molded plastic implies a process by which a product is formed and therefore given no patentable weight in an apparatus claim (See MPEP 2113)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILLIP JOHNSON whose telephone number is

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(571)270-5216. The examiner can normally be reached on MON - FRI, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phillip Johnson/
Examiner, Art Unit 3656

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3656